

CLAIM LISTING AND STATUS

1. (Currently Amended) A semiconductor laser, comprising:

a substrate;

an epitaxial structure deposited on said substrate;

a V-shaped semiconductor laser cavity formed in said epitaxial structure, said cavity having first and second legs, an optical axis parallel to said substrate and at least one output;

at least first and second spaced apart [one] etched gaps extending through one of said legs and separating said one of said legs into first, second and third and second spaced apart sections, said etched gaps each having two parallel etched facets that are perpendicular to said optical axis at said each etched gap; and

at least one distributed Bragg reflector (DBR) etched in said epitaxial structure at said at least one output.

2. (Withdrawn) The laser of claim 1, wherein the total length of said laser cavity is between about 10 μm and about 10,000 μm .

3. (Currently Amended) The laser of claim 1, wherein said at least one of said legs through which said first and second etched gaps extend ~~etched gap extends~~ includes an active region through which said etched facets of said etched gaps extend, and wherein said gaps each have gap has a length of between about 0.001 μm and about 10 μm .

(Withdrawn) The laser of claim 1, further including at least one photonic device coupled to said output of said laser cavity.

5-13. (Cancelled)

14. (Withdrawn) The semiconductor laser of claim 1, wherein an etched exit facet at or near the Brewster angle is at an end of said first leg of said V-shaped cavity.

15. (Withdrawn) The semiconductor laser of claim 14, wherein said first and second legs are joined at corresponding ends at a joint to form said V-shaped cavity, and wherein said etched exit facet is positioned at the joint of said first and second legs.

16. (Withdrawn) The semiconductor laser of claim 15, wherein an entrance facet is at a free end of said second leg of said V-shaped cavity.

17-24. (Cancelled)

25. (Currently Amended) A semiconductor device, comprising:
a substrate;
an epitaxial structure deposited on said substrate;

a semiconductor waveguide cavity formed in said epitaxial structure, said cavity having at least first and second legs joined at an output facet and an optical axis parallel to said substrate;

first and second [an] etched gaps extending through ~~at least~~ one of said legs and separating said one of said legs into first, second and third ~~and second~~ spaced apart sections, said etched gaps each [gap] comprising a pair of parallel etched facets that are perpendicular to said optical cavity and are spaced apart by a length of between about 0.001 μm and 10 μm .

26. (Cancelled)

27. (Cancelled)

28. (Withdrawn) The device of claim 26, wherein said semiconductor waveguide cavity incorporates a plurality of said legs coupled to form a ring laser.

29. (Withdrawn) The device of claim 28, said ring laser further including a photonic device having an input facet coupled to said output facet of said cavity.

30. (Withdrawn) The device of claim 29, wherein said photonic device is a V-shaped waveguide structure having an etched facet at or near the Brewster angle at a distal end.

31. (Currently Amended) A semiconductor laser, comprising:

a substrate;
an epitaxial structure deposited on said substrate;
a semiconductor laser cavity formed in said epitaxial structure and having a plurality of legs joined end-to-end to an etched facet to provide a laser output; and
first and second spaced apart etched gaps ~~at least one etched gap~~ extending through ~~at least one~~ of said legs and forming first, second and third ~~and second~~ spaced apart sections of said laser cavity, said cavity having an optical axis parallel to said substrate, said etched gaps each having two parallel facets which are perpendicular to said optical axis at said etched gaps.

32. (Previously Presented) The laser of claim 31, further including a DBR located externally of said laser cavity and adjacent said output etched facet.

33. (Withdrawn) The laser of claim 31, wherein the laser cavity includes three of said legs joined end-to-end to form a triangular ring laser.

34. (Withdrawn) The laser of claim 33, further including a photonic device coupled to said output, said photonic device including a facet at the Brewster angle to minimize back-reflection into said laser cavity.

35-47. (Cancelled)